



1225.001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

1505  
RECEIVED  
DEC 31 1996  
GROUP 1500

Applicants: Igarashi et al.

Serial No.: 08/680,610

Group Art Unit: 1505

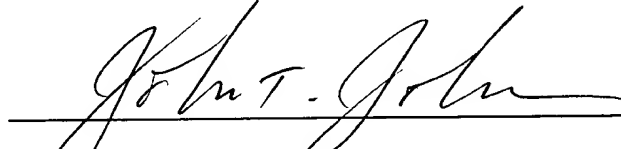
Filed: 7/16/96

Examiner:

Title: ACTIVE ENERGY BEAM-CURABLE COMPOSITIONS

*D. Cassaway*  
1/13/97CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on December 12, 1996.

  
John T. Johnson  
Attorney for Applicants  
Reg. No. 37,363Date of Signature: December 12, 1996To: Assistant Commissioner for Patents  
Washington, D.C. 20231SUBMISSION OF INFORMATION DISCLOSURE CITATION  
PURSUANT TO 37 C.F.R. §1.97(b)(3)

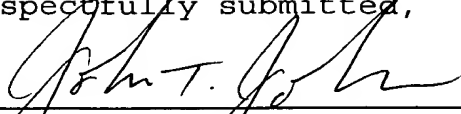
Dear Sir:

Pursuant to Applicants' duty of disclosure as set forth in 37 C.F.R. §1.56, enclosed please find PTO-Form 1449, together with copies of the references cited therein, and a "Statement of Relevance" for the references which are not in the English language. It is believed that the Information Disclosure Citation, and accompanying documents, are being submitted prior to the issuance of a first office action in the subject application, and therefore, are timely filed.

Applicants: Igarashi et al.  
Serial No.: 08/680,610  
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1225.001

Respectfully submitted,

  
\_\_\_\_\_  
John T. Johnson  
Attorney for Applicants  
Reg. No. 37,363

Dated: December 12, 1996

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Docket No. 1225.001 **RECEIVED**  
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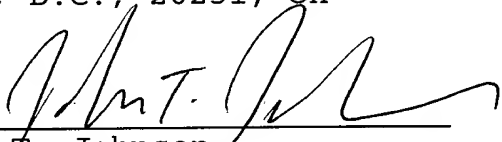
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Date of Signature: December 12, 1996

To: Assistant Commissioner for Patents  
Washington, D.C. 20231

STATEMENT OF RELEVANCE FOR INFORMATION DISCLOSED BY APPLICANT

Dear Sir:

The following Statement of Relevance is submitted with the accompanying Form PTO 1449:

Document  
Designation

Relevance

AB

The document describes an active energy ray-curable composition which has small viscosity but can rapidly be cured by active energy ray such as ultraviolet ray substrates that it can be used for coatings for protection, decoloration or insulation; sealing compound by pour; printing ink; sealants; adhesives; photoresists; wire-insulating materials; textile coatings; laminates; saturating tapes; printing plates or the like. Active energy ray-curable composition comprising 1) compounds having one oxetane ring in molecules, 2) compounds having at least one oxirane ring in molecules and 3) compounds which cause cationic polymerization under irradiation with active energy rays.

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Document  
Designation

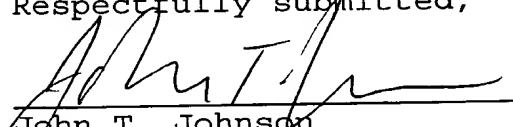
Relevance

AC

Composition comprises a cpd. bearing at least two oxetane rings per molecule, a cpd. bearing at least one oxirane ring per molecule and a cpd. initiating cationic polymerization by irradiation of an active energy. The compositions are useful for protective, ornamental and insulation coatings, sealing materials, printing inks, adhesives, impregnated tapes and printed plates. The compositions have rapid curing properties in a wide viscosity range to give cured compositions, with excellent adhesion to the substrate, hardness, tensile strength, elongation and heat and chemical resistance. In an example, 2.5 pts.wt. diphenyl-4-thiophenoxyphenyl sulphonium hexafluorantimonate was added to a mixture of 75 pts.wt. of a cpd. of formula (13) and 25 pts.wt. bisphenol A diglycidyl ether to give an active energy-curable composition with a viscosity at 25 deg.C. of 148 cps. A film obtained from the compositions has a pencil hardness of H and a test specimen obtained from the composition had excellent adhesion to a sheet steel substrate and a tensile strength of 430 kg/cm<sup>2</sup> and an elongation of below 5%.

Full text copies of the art cited, or the pertinent portions thereof, are enclosed. It is respectfully requested that this art be considered by the Examiner in the above-entitled application and made of record therein. The information provided and references enclosed herewith shall not be construed as a representation that a search has been made or that no other art than that identified exists.

Respectfully submitted,

  
John T. Johnson  
Attorney for Applicants  
Reg. No. 37,363

Dated: December 12, 1996

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